SEQUENCE LISTING

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ASHIHARA, Hiroshi
MIZUNO, Kouichi
FUJIMURA, Tatsuhito

<120> Gene encoding caffeine synthesis system associated enzyme and use thereof

<130> 029430-454

<140> US 09/577,657
<141> 2000-05-25

<150> JP 146358/1999
<151> 1999-05-26

<160> 21

<170> PatentIn version 3.0

<210> 1
<211> 356
<212> PRT
<213> Camellia sinensis

<400> 1

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Val Glu Thr Leu Phe Ser Arg Asp Phe His Leu Gln Ala Leu Asn Ala
        35                  40                  45

Ala Asp Leu Gly Cys Ala Ala Gly Pro Asn Thr Phe Ala Val Ile Ser
    50                  55                  60

Thr Ile Lys Arg Met Met Glu Lys Lys Cys Arg Glu Leu Asn Cys Gln
65                  70                  75                  80

Thr Leu Glu Leu Gln Val Tyr Leu Asn Asp Leu Phe Gly Asn Asp Phe
                85                  90                  95

Asn Thr Leu Phe Lys Gly Leu Ser Ser Glu Val Ile Gly Asn Lys Cys
            100                 105                 110

Glu Glu Val Pro Cys Tyr Val Met Gly Val Pro Gly Ser Phe His Gly
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Arg Leu Phe Pro Arg Asn Ser Leu His Leu Val His Ser Ser Tyr Ser
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Val His Trp Leu Thr Gln Ala Pro Lys Gly Leu Thr Ser Arg Glu Gly
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Leu Ala Leu Asn Lys Gly Lys Ile Tyr Ile Ser Lys Thr Ser Pro Pro
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Val Val Arg Glu Ala Tyr Leu Ser Gln Phe His Glu Asp Phe Thr Met
            180                 185                 190

Phe Leu Asn Ala Arg Ser Gln Glu Val Val Pro Asn Gly Cys Met Val
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Leu Ile Leu Arg Gly Arg Gln Cys Ser Asp Pro Ser Asp Met Gln Ser
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Cys Phe Thr Trp Glu Leu Leu Ala Met Ala Ile Ala Glu Leu Val Ser
225                 230                 235                 240

Gln Gly Leu Ile Asp Glu Asp Lys Leu Asp Thr Phe Asn Ile Pro Ser
                245                 250                 255

Tyr Phe Ala Ser Leu Glu Glu Val Lys Asp Ile Val Glu Arg Asp Gly
            260                 265                 270

Ser Phe Thr Ile Asp His Ile Glu Gly Phe Asp Leu Asp Ser Val Glu
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Met Gln Glu Asn Asp Lys Trp Val Arg Gly Glu Lys Phe Thr Lys Val
    290                 295                 300

Val Arg Ala Phe Thr Glu Pro Ile Ile Ser Asn Gln Phe Gly Pro Glu
305                 310                 315                 320

Ile Met Asp Lys Leu Tyr Asp Lys Phe Thr His Ile Val Val Ser Asp
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Lys Ile Asp Gly
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<213> Camellia sinensis

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aaagtagtta tgcacaaaac tcttctttca cgcaacaagt ggcctcaatg gcacagccag 180

cgctagaaaa tgcagttgaa actctcttct ccagagattt ccaccttcaa gctcttaacg 240

cagcggactt gggttgtgca gcgggtccaa acacattcgc agtgatttct acgatcaaga 300

gaatgatgga aaagaaatgc agggaattga attgccaaac actggaactt caggtttact 360

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ttggtaacaa atgtgaggaa gttccgtgtt atgtgatggg agtaccgggg tctttccatg 480

gccggctttt tcctcgtaac agcttacatt tagttcattc ctcttacagt gttcattggc 540

ttactcaggc accaaaagga ctcacaagca gagaaggctt ggcattaaac aaggggaaga 600

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gggaactatt agctatggcc attgctgaat tggtttcaca gggattgata gatgaagata 840

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tggagaggga cggatcattc acaattgatc atatagaggg gtttgatctt gatagcgtag 960

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aattcactca cattgtagtt tcagatttgg aagcaaagct accgaagacc acaagtatca 1140

tcctagtgct ttccaagatt gatggatagt tttttagtgt tgtgaaataa actgttgtcc 1200

ctatcacata tatgccacta gagggttgtg ccaatgtatt gcacaagaag atttgagagg 1260

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aaaaaaaaaa aaaaaaaaaa aaaaaaaatt cctgcggccg cgaattc 1427

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aaaguaguua ugcacaaaac ucuucuuuca cgcaacaagu ggccucaaug gcacagccag 180

cgcuagaaaa ugcaguugaa acucucuucu ccagagauuu ccaccuucaa gcucuuaacg 240

cagcggacuu ggguugugca gcggguccaa acacauucgc agugauuucu acgaucaaga 300

gaaugaugga aaagaaaugc agggaauuga auugccaaac acuggaacuu cagguuuacu 360

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uugguaacaa augugaggaa guuccguguu augugauggg aguaccgggg ucuuuccaug 480

gccggcuuuu uccucguaac agcuuacauu uaguucauuc cucuuacagu guucauuggc 540

uuacucaggc accaaaagga cucacaagca gagaaggcuu ggcauuaaac aaggggaaga 600

uuuacauauc aaagacaagc ccuccuguug uaagagaagc cuacuuaucu caauuucaug 660

aagauuucac aauguuucuc aaugcuagau cccaagaggu gguuccaaau gguuguaugg 720

uguugauacu ucgugguagg caauguucug auccuucaga caugcagagc ugcuuuacuu 780

gggaacuauu agcuauggcc auugcugaau ugguuucaca gggauugaua gaugaagaua 840

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uggagaggga cggaucauuc acaauugauc auauagaggg guuugaucuu gauagcguag 960

aaaugcagga gaaugauaaa uggguuagag gggaaaaguu uaccaagguu gucagggccu 1020

ucacagagcc uauaauuuca aaccaguuug gaccugaaau cauggacaaa cuauaugaca 1080

aauucacuca cauuguaguu ucagauuugg aagcaaagcu accgaagacc acaaguauca 1140

uccuagugcu uuccaagauu gauggauagu uuuuuagugu ugugaaauaa acuguugucc 1200

cuaucacaua uaugccacua gaggguugug ccaauguauu gcacaagaag auuugagagg 1260

ggucaaauau agaaagcauu uugcucuugu guggagagag aauguuuucu ugauuuaaau 1320

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aaaaaaaaaa aaaaaaaaaa aaaaaaaauu ccugcggccg cgaauuc 1427

<210> 4
<211> 20
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<220>
<221> PEPTIDE
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<223> Amino acid at position 7 is Xaa wherein Xaa = other amino acid.

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Phe Thr Gln Val
20

<210> 5
<211> 19
<212> DNA
<213> Camellia sinensis

<220>
<221> misc_feature
<222> (12)..(15)
<223> Nucleotides 12 and 15 are "n" wherein "n" = i.

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<210> 6
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<400> 6
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<400> 7
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